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PUBLICATIONS

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ABSTRACTS

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142. Á. Höskuldsson, R. Hey, F. Martinez, Á. Benediktsdóttir, Njördur central volcano, first direct evidence of shallow magma chambers on the Reykjanes Ridge, 29th Nordic Geological Winter Meeting, January 11-13, Oslo, 2010.
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Recent Teaching Record

NB: When I was hired I was offered the choice of becoming a Professor or Researcher, and chose Professor. It thus came as a shock later when I didn't get a raise that only instructional faculty got, although I was teaching as much as they were. I discovered I had instead been hired as a Researcher, had no formal teaching requirement, and thus cut back on my teaching, although I have continued to regularly teach the plate tectonics course I initiated when I thought I was a professor, and to guest lecture in other courses. Not all research faculty in SOEST teach; those of us who do are sometimes called Research Professors, or as my Dean refers to me, Professor & Geophysicist.

Fall 2009, GG/OCN 444, Plate Tectonics, 3 credit hours, 100% taught by me, 11 students, mean instructor grade 4.64 (I was one of 7 professors acknowledged by the GG Dept. Chair for especially strong reviews this semester).

GG 699 Directed Research (very recent only):
 Fall 2008, 3 credits
 Spring 2009, 2 credits
 Fall 2009, 5 credits

Fall 2007, GG/OCN 444, Plate Tectonics, 12 students, instructor rating 4.64 (4=very good, 5=excellent), all evaluations either strongly agreed (7) or agreed (4) that my instructor performance was excellent.

Fall 2005, GG/OCN 444, Plate Tectonics, 10 students, instructor rating 4.25, all but one of the evaluations either strongly agreed or agreed that my overall performance was excellent, one trashed me.

Fall 2003, GG/OCN 444, Plate Tectonics, 10 students, 1 auditor, instructor rating 4.8, excellent (i.e. 2 students who evaluated the course agreed that instructor performance was excellent; the other 8 strongly agreed).

Fall 2001, GG/OCN 444, Plate Tectonics, 9 students, 1 auditor, instructor rating 5.0 (= excellent)

Fall 1999, GG/OCN 444, Plate Tectonics, 9 students, 2 auditors, instructor rating 4.3

Fall 1997, GG/OCN 444, Plate Tectonics, 11 students, instructor rating 4.4

Fall 1994, OCN 622, Geological Oceanography (team taught), 8 students, my instructor rating 5.0

Fall 1994, GG/OCN 444, Plate Tectonics, 8 students, instructor rating 4.5

Fall 1993, OCN 622, Geological Oceanography (team taught), 16 students, my instructor rating 4.94

Fall 1992, OC/GG 444, Plate Tectonics, 8 students, instructor rating 5.0

Fall 1991, OC622, Geological Oceanography (team taught), 14 students

Fall 1990, OC622, Geological Oceanography (team taught), 12 students

Fall 1990, GG444, Plate Tectonics, 10 students, instructor rating 4.6

Fall 1989, GG710, Propagating Rift Seminar, 5 students, instructor rating 4.5

Fall 1989, GG101, Introduction to Geology, 35 students, instructor rating 4.2

Spring 1989, GG672, Seminar in Plate Tectonics, 9 students, ASUH course rating 4.3, instructor rating 3.8

Spring 1989, GG361, Potential & Electrical Methods, 4 students, ASUH course rating 4.3, instructor rating 5.0

Spring 1988, GG672, Seminar in Plate Tectonics, 16 students, ASUH course rating 4.6, instructor rating 4.6

FUNDING RECORD

- 29) Investigation of Reykjanes Ridge Evolution near Iceland
- Principal Investigator: R.N. Hey
 Funding Source: National Science Foundation
 Grant Number: OCE-0452132
 Duration: 09/15/06-08/31/11
 Total Funding: \$373,394 (+ 34 days shiptime)
- 28) Collaborative Research: Detailed Analysis of High-Resolution Morphological Data and Water-Column Hydrothermal Measurements along Earth's Fastest Spreading Center, EPR 27-32°S
- Principal Investigator: R.N. Hey
 Funding Source: National Science Foundation
 Grant Number: OCE-0520833
 Duration: 10/01/05-09/30/09
 Total Funding: \$56,839
- 27) Structure and Composition of Fast Spread EPR Crust Exposed at Pito Deep
- Principal Investigator: R.N. Hey
 Funding Source: National Science Foundation
 Grant Number: OCE-0221064
 Duration: 2/15/04-1/31/09
 Total Funding: \$86,016 (Hawaii share of major ALVIN/ROV expedition led by Jeff Karson, Duke)
- 26) Collaborative Research: SGER-Pilot Study of Vestmannaeyjar Using High-Resolution Seismic Reflection
- Principal Investigator: R.N. Hey
 Funding Source: National Science Foundation
 Grant Number: OCE-0329308
 Total Funding: \$19,191
 Funding Period: 6/1/03-5/31/04
- 25) Hydrothermal and Structural Investigations Along the Fastest Spreading Center: The 28°-32°S EPR Reorganizing Plate Boundary (Renewal)
- Principal Investigator: R.N. Hey
 Funding Source: National Science Foundation
 Grant Number: OCE-9906896
 Total Funding: \$147,718
 Funding Period: 12/1/99-11/30/02
- 24) Hydrothermal and Structural Investigations Along the Fastest Spreading Center: The 28°-32°S EPR Reorganizing Plate Boundary
- Principal Investigator: R.N. Hey

Funding Source: National Science Foundation
 Grant Number: OCE-9529737
 Total Funding: \$415,227 (+ 40 days shiptime)
 Funding Period: 12/1/96-11/30/98

- 23) GLORIA Investigation of the Fastest Spreading Segment of the Global Seafloor Spreading System (Renewal)

Principal Investigator: R.N. Hey
 Funding Source: National Science Foundation
 Grant Number: OCE-9503624
 Total Funding: \$130,000
 Funding Period: 8/15/95-8/14/97

- 22) Propagating Rifts and Spreading Centers into Continents: The Woodlark Basin (Renewal)

Principal Investigators: B. Taylor, R.N. Hey, and F. Martinez
 Funding Source: National Science Foundation
 Grant Number: OCE-9503505
 Total Funding: \$158,474
 Funding Period: 07/01/95 - 12/31/96

- 21) Propagating Rifts and Spreading Centers into Continents: The Woodlark Basin

Principal Investigators: B. Taylor, R.N. Hey, and F. Martinez
 Funding Source: National Science Foundation
 Grant Number: OCE-9201691
 Total Funding: \$696,960 (+ 37 days shiptime)
 Funding Period: 1/1/93 - 12/31/96

- 20) GLORIA Investigation of the Fastest Spreading Segment of the Global Seafloor Spreading System

Principal Investigator: R.N. Hey
 Funding Source: National Science Foundation
 Grant Number: OCE-9101341
 Total Funding: \$521,489 (+ 39 days shiptime)
 Funding Period: 12/15/92 - 05/31/96

- 19) GLORIA and Geochemical Investigation of the Easter Seamount Chain

Principal Investigators: R. Batiza and R.N. Hey
 Funding Source: National Science Foundation
 Grant Number: OCE-9214496
 Total Funding: \$54,138 (+ 59 days shiptime) (UH share of \$700K grant we were co-l's on)

Funding Period: 1/1/93 - 12/31/94

18) Submersible Magnetometer Investigation of Easter Microplate Rotation and Deformation

Principal Investigator: R.N. Hey
 Funding Source: National Science Foundation
 Grant Number: OCE-9202271
 Total Funding: \$29,024
 Funding Period: 05/01/92 - 04/30/94

17) ABR: SeaMARC II Investigation of the Easter Microplate

Principal Investigator: R.N. Hey
 Funding Source: National Science Foundation
 Grant Number: OCE90-19127
 Total Funding: \$45,329
 Funding Period: 3/1/91 - 8/31/92

16) SeaMARC II Investigation of the Easter Microplate

Principal Investigators: R.N. Hey and D.M. Hussong
 Funding Source: National Science Foundation
 Grant Number: OCE86-10412
 Total Funding: \$423,000 (+ 32 days shiptime)
 Funding Period: 3/1/87 - 8/31/90

15) Detailed Tectonic Evolution of the Seafloor Offshore Western North America

Principal Investigator: R. N. Hey
 Funding Source: National Science Foundation
 Grant Number: OCE87-01781
 Total Funding: \$118,732
 Funding Period: 1/1/87 - 6/30/89

14) Galapagos Rift System: Tectonic and Geophysical Studies Using ALVIN

Principal Investigators: R.N. Hey and J.M. Sinton
 Funding Source: National Science Foundation
 Grant Number: OCE83-15364
 Total Funding: \$446,701 (+31 days shiptime and 20 dives)
 Funding Period: 3/1/85 - 2/28/88

13) Seafloor Spreading in the Northeast Pacific: Early Tertiary Lithospheric Plate Reorganization

Principal Investigators: H.W. Menard and R.N. Hey

- Funding Source: National Science Foundation
 Grant Number: OCE83-15366
 Total Funding: \$243,802 (+ 30 days shiptime)
 Funding Period: 1/1/84 - 10/31/87
- 12) Seismicity and Structure of the Galapagos Propagating Rift
- Principal Investigators: J.A. Orcutt, R.N. Hey, and J. Phipps Morgan
 Funding Source: National Science Foundation
 Grant Number: OCE86-14605
 Total Funding: \$288,826 (+ 63 days shiptime)
 Funding Period: 2/15/87 - 2/14/88
- 11) Modelling Seafloor Structural Patterns
- Principal Investigator: R. N. Hey
 Funding Source: Office of Naval Research
 Grant Number: ONR USN N00014-85-C-0104
 Total Funding: \$97,085
 Funding Period: 10/1/84 - 9/30/86
- 10) Tectonic Evolution of the Easter Microplate/Propagating Rift System
- Principal Investigator: R. N. Hey
 Funding Source: National Science Foundation
 Grant Number: OCE82-15396
 Total Funding: \$225,700 (+ 34 days shiptime)
 Funding Period: 3/1/83 - 5/31/86
- 9) SeaMARC II Investigation of the Galapagos 95.5°W Propagator
- Principal Investigators: F.K. Duennebier, J.M. Sinton, and R.N. Hey
 Funding Source: National Science Foundation
 Grant Number: OCE84-08808
 Total Funding: \$73,130 (+ 10 days shiptime)
 Funding Period: 8/1/84 - 6/30/85
- 8) Plate Motions and Deformations from Geologic and Geodetic Data
- Principal Investigators: T.H. Jordan and R.N. Hey
 Funding Source: National Aeronautics and Space Administration
 Grant Number: NASA NAS5-27234
 Total Funding: \$97,000
 Funding Period: 6/1/82 - 5/31/84
- 7) High-Resolution Study of Propagating Rifts

Principal Investigators: R.N. Hey and F.N. Spiess
 Funding Source: National Science Foundation
 Grant Number: OCE81-09927
 Total Funding: \$405,945 (+ 42 days shiptime)
 Funding Period: 8/1/81 - 7/31/84

6) Investigation of Rift Propagation and Plate Tectonics

Principal Investigator: R.N. Hey
 Funding Source: Office of Naval Research
 Grant Number: N00014-80-C-0440
 Total Funding: \$270,220
 Funding Period: 5/1/81 - 9/30/84

5) Synthesis of Geological, Geophysical Data Over the Galapagos Spreading Center (Area VIII-4)

Principal Investigator: R. N. Hey
 Funding Source: Joint Oceanographic Institutions, Inc.
 Grant Number: Subcontract No. 35-81
 Total Funding: \$35,404
 Funding Period: 1/1/81 - 12/31/81

4) Galapagos Rift System: Test of Propagating Rift Model

Principal Investigators: R. N. Hey, J. M. Sinton, J. A. Philpotts, and F. K. Duennebie
 Funding Source: National Science Foundation
 Grant Number: OCE78-19816
 Total Funding: \$437,010 (+ 71 days shiptime)
 Funding Period: 2/1/79 - 7/31/81

3) Marine Magnetism Program

Principal Investigator: R. N. Hey
 Funding Source: Office of Naval Research
 Grant Number: N00014-75-C-0209-P09
 Total Funding: \$160,360
 Funding Period: 12/1/77 - 2/28/81

2) Investigation of Magnetic Anomalies Associated with Spreading Center Jumps

Principal Investigator: R. N. Hey
 Funding Source: National Science Foundation
 Grant Number: OCE76-21966
 Total Funding: \$57,600

Funding Period: 9/1/76 - 5/31/80

- 1) An Investigation of the Nazca Lithospheric Plate and its Interaction with the South American Continental Block: Subtask: Marine Magnetism and Plate Tectonics

Principal Investigator: R. N. Hey
Funding Source: National Science Foundation
Grant Number: GX-28674
Total Funding: \$20,654
Funding Period: 1/1/76 - 12/31/76

Scientific Expeditions

1970 May-June, Pacific-Cocos-Nazca triple junction survey, Panama-Panama, Princeton University/U.S. Navy, chief scientist K.S. Deffeyes, USNS DE STEIGUER.

1974 January-February, Africa-Antarctica spreading center survey near Bouvet Island, Cape Town-Cape Town, MIT/Woods Hole Oceanographic Institution, chief scientist C. Bowin, R/V CHAIN.

1974 February-March, South America-Africa-Antarctica triple junction survey, Cape Town-Cape Town, MIT/Woods Hole Oceanographic Institution, chief scientist J.G. Sclater, R/V CHAIN.

1974 October, Gulf of Mexico multichannel seismic survey, Veracruz-Galveston, University of Texas Marine Science Institute, Chief scientist J. Watkins, R/V IDA GREEN.

**1975 March, student training cruise, Gulf of Mexico, Galveston-Galveston, University of Texas Marine Science Institute, chief scientist R.N. Hey, R/V IDA GREEN.

1976 February-March, Mariana trench IPOD site survey, Guam-Guam, Hawaii Institute of Geophysics, chief scientist D.M. Hussong, R/V KANA KEOKI.

1976 March, Mariana trench-Ontong Java plateau survey, Guam-Honiara, Guadalcanal, Hawaii Institute of Geophysics, chief scientist D.M. Hussong, R/V KANA KEOKI.

1976 April, Central Pacific basin transect, Honiara, Guadalcanal-Honolulu, Hawaii Institute of Geophysics, chief scientist S.R. Hammond, R/V KANA KEOKI.

**1976 October, IPOD Pac #6 survey, Honolulu-Honolulu, Hawaii Institute of Geophysics, chief scientist R.N. Hey, R/V KANA KEOKI.

**1979 March-May, Investigations of propagating rifts west of the Galapagos Islands, Acapulco-Santa Cruz, Galapagos, Hawaii Institute of Geophysics, chief scientist R.N. Hey, R/V KANA KEOKI.

**1979 May, Galapagos Islands rock sampling cruise, Santa Cruz-Santa Cruz, Galapagos, Hawaii Institute of Geophysics/Darwin Research Station, chief scientist R.N. Hey, Barco SAN JUAN.

**1979 May-June, Investigations of propagating rifts east of the Galapagos Islands, Puerto San Jose, Guatemala-Santa Cruz, Galapagos, Hawaii Institute of Geophysics, chief scientist R.N. Hey, R/V KANA KEOKI.

1980 October, Search for RUWS (remote unmanned work station) using ANGUS, Honolulu-Kona, Woods Hole Oceanographic Institution/Hawaii Institute of Geophysics, chief scientist R.D. Ballard, R/V KANA KEOKI.

*1981 April-May, Survey of a propagating rift tip and hotspot along the Pacific-Juan de Fuca spreading center using Sea Beam, Seattle-Seattle, National Ocean Survey, chief scientist S.R. Hammond, USS SURVEYOR.

1982 June, Deep-Tow/Sea Beam test cruise, Continental Borderland, San Diego-San Diego, Scripps Institution of Oceanography, chief scientist F.N. Spiess, R/V THOMAS WASHINGTON.

**1982 September-October, Sea Beam/Deep-Tow investigation of the Galapagos 95.5°W propagating rift system, Panama-Manzanillo-San Diego, Scripps Institution of Oceanography, chief scientist R.N. Hey, R/V THOMAS WASHINGTON.

**1983 April, Sea Beam investigation of the Easter Microplate, Easter Island-Callao, Scripps Institution of Oceanography, chief scientist R.N. Hey, R/V THOMAS WASHINGTON.

1984 April-May, GLORIA survey of the Southern California Continental Borderland and Baja California Seamount Province within the U.S. Exclusive Economic Zone between the Mexican border and Pt. Arguello, San Diego-Long Beach, USGS/British Institute for Oceanographic Sciences, chief scientist M. Field, MV FARNELLA.

*1984 July-August, Sea Beam investigation of large-scale changes in direction of seafloor spreading, Kodiak-Honolulu, Scripps Institution of Oceanography, chief scientist H.W. Menard, R/V THOMAS WASHINGTON.

1984 August-September, Endeavour ridge dredging program and ALVIN taxi service, Seattle-Seattle, University of Washington/Oregon State University, chief scientist M. Goldfarb, R/V WECOMA.

1984 September, ALVIN/All investigation of the Juan de Fuca spreading center/propagating rift system, Seattle- Astoria, University of Washington/Woods Hole Oceanographic Institution, chief scientist J.R. Delaney, R/V ATLANTIS II, DSRV ALVIN.

*1985 January, SeaMARC II investigation of the Galapagos 95.5°W propagator, Galapagos-Galapagos, Hawaii Institute of Geophysics, chief scientist F.K. Duennebie, R/V MOANA WAVE.

**1985 April-May, ALVIN/All investigation of the Galapagos 95.5°W propagating rift system, Puntarenas, Costa Rica-Acapulco, Scripps Institution of Oceanography/Woods Hole Oceanographic Institution, chief scientist R.N. Hey, R/V ATLANTIS II, DSRV ALVIN.

1985-1986 December-January, Sea Beam/dredging investigation of the Lau back-arc basin, Pago Pago- Tongatapu, Scripps Institution of Oceanography, chief scientist J.W. Hawkins, R/V THOMAS WASHINGTON.

1986 April-May, Sea Beam/water sampling investigation of the Mariana trough back-arc spreading center, Guam-Sasebo, Scripps Institution of Oceanography, chief scientist H. Craig, R/V THOMAS WASHINGTON.

1987 April, ALVIN/All investigation of the Mariana trough back-arc spreading center hydrothermal vents, Guam-Saipan, Scripps Institution of Oceanography/Woods Hole Oceanographic Institution, chief scientist H. Craig, R/V ATLANTIS II, DSRV ALVIN.

*1987 June, Sea Beam survey of AT&T cable routes, Honolulu-Honolulu, Seafloor Surveys International/Scripps Institution of Oceanography, chief scientist D.M. Hussong, R/V THOMAS WASHINGTON.

**1987 October-November, SeaMARC II investigation of the Easter Microplate, Easter Island-Easter Island, Hawaii Institute of Geophysics, chief scientist R.N. Hey, R/V MOANA WAVE.

*1988 October-November, GLORIA survey of the Easter Microplate, Papeete-Valparaiso, British Institute of Oceanographic Sciences, chief scientist R.C. Searle, RRS CHARLES DARWIN.

**1993 February-March, GLORIA investigation of the fastest seafloor spreading center, Papeete-Easter Island, SOEST, University of Hawaii, chief scientist R.N. Hey, R/V MELVILLE.

*1993 April-May, HMRI (SeaMARC) investigation of the Woodlark Basin, Lae-Guam, SOEST, University of Hawaii, chief scientist B. Taylor, R/V MOANA WAVE.

*1993 November, NAUTILE submersible investigation of the Easter microplate, Easter Island-Easter Island, Universite de Bretagne Occidentale, chief scientist J. Francheteau, R/V NADIR, DSRV NAUTILE.

**1998 March-April, Hydrothermal and structural investigations along the fastest spreading center: The 28°-32°S EPR reorganizing plate boundary, using DSL-120 and CTD/SUAVE tows, Easter Island-Papeete, SOEST, University of Hawaii/NOAA PMEL, chief scientist R.N. Hey, R/V MELVILLE.

1999 January, ALVIN biological and geochemical sampling of hydrothermal vents along the fastest spreading center, EPR 31°-32°S, Easter Island-Easter Island, Rutgers University/NOAA PMEL, chief scientist R. Vrijenhoek, R/V ATLANTIS, DSV ALVIN.

**2003 July, High-resolution chirp SUBSCAN seismic reflection survey of Vestmannaeyjar, Iceland, Reykjavik-Heimaey, SOEST, University of Hawaii/ Woods Hole Oceanographic Institution/ Scripps Institution of Oceanography/University of Iceland, chief scientist R.N. Hey, R/S BJARNI SAEMUNDSSON.

*2003 July-August, EM300 survey of Vestmannaeyjar and the Reykjanes Ridge, Iceland, Heimaey-Reykjavik, University of Iceland/ SOEST, University of Hawaii, chief scientist A. Hoskuldsson, R/S ARNI FRIDRIKSSON.

*2005 January-March, DSL-120A, Jason and Alvin investigations of Pito Deep, Easter Microplate, Duke University/ University of South Florida/ SOEST, University of Hawaii/Scripps Institution of Oceanography, chief scientist J. Karson, R/V ATLANTIS, DSV ALVIN (I was one of numerous co-Chief Scientists with my own funding in charge of my own project, the Alvin magnetometer investigations).

**2007 June-July, Seabeam, magnetics, and gravity survey of the Reykjanes Ridge south of Iceland, Reykjavik- Reykjavik, SOEST, University of Hawaii, chief scientist R.N. Hey, R/V KNORR

**Chief Scientist

*Co-Chief Scientist